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resolution of a liquid crystal panel. The device of the two-eye system displays an image for a right eye and an image for a left eye on every alternate vertical line on a liquid crystal display panel 200 as shown in Fig. 1. A lenticular lens and a parallax barrier (not shown) are structured so that a viewer 2 in an optimum viewing position D can observe an image for a right eye and an image for a left eye alternately with a pitch of an interval between pupils E.

Page 4, Paragraph 3

This invention was made to provide a stereoscopic image display device autostereoscopic image display device capable of ensuring stereoscopic view in a position apart from an optimum viewing position with a great distance in back and forth directions.

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A stereoscopic image display device autostereoscopic image display device according to this invention comprises image display means for displaying a left eye image and a right eye image in alternate stripe shapes, shading means for shifting a position of a shading part for generating binocular parallax effect, and a sensor for detecting a head position of a viewer. The stereoscopic image display device includes area shifting and division control means for dividing the shading means into areas in a horizontal direction and controlling shifting of a shading part in each of the areas.

Page 9, Paragraph 7

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Fig. 9 is a perspective view illustrating a stereoscopic image display device autostereoscopic image display device according to the embodiment of the present invention and a viewer;

Page 10, Paragraph 4

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Fig. 14 is a block diagram illustrating a structure of the stereoscopic image display device autostereoscopic image display device according to the embodiment;

Page 14, Paragraph 2

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A stereoscopic image display device autostereoscopic image display device according to the embodiment is structured so that a shading part of shading means for generating binocular parallax effect shifts by 1/4 of a pitch of the shading part as shown in JP9-197344, A. With this structure, the shading means is divided into areas in a horizontal direction and

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the number of divided areas and whether or not the shading parts are shifted by $1/4$ of its pitch in each of the areas are determined, and displaying of an image on a display area corresponding to the above area is controlled.

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Fig. 9 illustrates the viewer 2 watching a stereoscopic display device 1 autostereoscopic image display device. Sensors 101 for detecting a head position of the viewer 2 are mounted on upper ends of the stereoscopic display device 1 autostereoscopic image display device. Figs. 10, 11 illustrate a display 1a with shading means divided into three areas of H1, H2, and H3 when the sensors 101 detect the head of the viewer 2 shifts. When the shading means does not shift by a $1/4$ pitch, the right and left eyes images respectively pass the areas R, L of "before shifting" in the figure. When the shading means shifts by a $1/4$ pitch, the right and left eye images respectively pass the areas R', L' of "after shifting" in the figure. When replacing arrangement of the right and left eye images, a left eye image passes through the R, R' areas for originally passing the right eye image, and a right eye image passes through the L, L' areas for originally passing the left eye image.

Page 19, Paragraph 2

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The pitch (Q) is formed so that a pair of the continuous shading part 10b and either of the transparent electrodes 10a1(10a2), 10c1(10c2) correspond to two pixels of the liquid crystal panel 20 in order to ensure stereoscopic viewing autostereoscopic image display device when the shading part is on. Either of the transparent electrodes 10a1 (10a2) or 10c1(10c2) for ensuring shifting of the shading part is turned on by corresponding to the position of the viewer 2. A width of the transparent electrodes 10a1 (10a2) and 10c1(10c2) is formed so that a part not superimposing with the continuous shading part 10b is $Q/4$. Therefore, the shifting of the shading part by $Q/4$ is ensured by switching the ON/OFF of the transparent electrodes. The liquid crystal shutter comprises the transparent electrodes 10a1 (10a2) and 10c1(10c2).

Page 20, Paragraph 1

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Fig. 14 is a block diagram illustrating a structure of the stereoscopic image display device autostereoscopic image display device. In this block diagram, the device according to the